

COUNTY BOROUGH OF WARRINGTON.

---

# ANNUAL REPORT

TO THE

EDUCATION AUTHORITY

ON

## SCHOOL HYGIENE

FOR THE YEAR 1916,

BY

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WARRINGTON :

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## SECTION II.

MEASURES TAKEN TO PREVENT THE SPREAD OF INFECTIOUS DISEASE  
AMONG SCHOOL CHILDREN.

The measures taken for the prevention of the spread of infectious disease among school children have been the same as in previous years and will not be detailed here (for full particulars see Annual Report for 1914).

The following table shows the number of cases of the notifiable infectious diseases occurring among children of school age compared with the three preceding years.

NOTIFIABLE INFECTIOUS DISEASE OCCURRING AMONG SCHOOL  
CHILDREN.

	Scarlet Fever.	Diph- theria.	Enteric Fever.	Pulmon- ary Tuber- culosis.	Other Tuber- cular Diseases	Measles.	German Measles.
	cases	cases	cases	cases	cases	cases	cases
1913	159	59	10	31	68	—	—
1914	630	69	7	28	59	—	—
1915	579	43	5	15	26	—	—
1916	135	46	2	13	29	493	26

It will be observed that Measles and German Measles are included in this table for the first time. These diseases became compulsorily notifiable on 1st January, 1916.

The Public Health Authority, as a result of this Measure, now have complete knowledge of the extent of the spread of the disease throughout the town, and will, therefore, be able to take steps to limit, as far as possible, the spread of infection. More important still is the fact that we are in a position to get in touch with cases early and thus possibly be able to prevent some of that huge toll of death or disability which is due every year to measles.

In the past our knowledge of the number of cases occurring in school children may be considered to have been

fairly complete for several years owing to the extremely useful system of notification to the Health Department by the Officials of the Education Department of all cases of infectious disease coming to their notice. But it was otherwise with cases occurring in children under school age.

The following table is interesting in showing the number of cases of measles of which we have known since 1909:—

		Children under school age.	Children of school age and over.	Total.
1909	...	—	904	904
1910	...	—	224	224
1911	...	—	695	695
1912	...	291	677	968
1913	...	146	651	797
1914	...	309	628	937
1915	...	193	279	472
*1916	...	613	519	1132

(\* First year of compulsory notification.)

Here it is seen that the total number of cases for 1916 was 1,132.

It will be noticed, however, that more than half this number is due to cases occurring in children under school age, and therefore due to the new system of notification rather than to any large epidemic.

There was a decided increase in the number of cases during the last quarter of the year, and, in taking steps to limit the spread of the disease, children were excluded from the following schools.

Date of Exclusion.	School.	Length of Exclusion.	Reason for Exclusion.	Remarks.
*Oct. 27	Evelyn St. Infants	14 days	Prevalence of Measles	Only those children who have not al- ready had the disease excluded.
„	St. Barnabas' Infants	14 „	„	„
„	Trinity Infants	14 „	„	„
„	Thewlis St. Infants	14 „	„	„

\* October 27th to November 6th, School Holidays.



Further details of cases of Measles and German Measles will be found in the next two tables:—

NUMBER OF CASES OF MEASLES known to have occurred among School Children and those under School Age during the Years 1914, 1915 and 1916.

	Among Children attending Schools.			Among Children under School Age.			Totals.		
	1914	1915	1916	1914	1915	1916	1914	1915	1916
1st Quarter .....	193	135	57	92	88	26	285	223	83
2nd Quarter .....	387	113	72	199	89	53	586	202	125
3rd Quarter .....	16	15	29	7	5	39	23	20	68
4th Quarter .....	32	16	335	11	11	485	43	27	820
	628	279	493	309	193	603	937	472	1096

NUMBER OF CASES OF GERMAN MEASLES known to have occurred among School Children and those under School Age during the Years 1914, 1915 and 1916.

	Among Children attending Schools.			Among Children under School Age.			Totals.		
	1914	1915	1916	1914	1915	1916	1914	1915	1916
1st Quarter .....	4	2	6	—	—	3	4	2	9
2nd Quarter .....	—	—	18	—	—	6	—	—	24
3rd Quarter .....	5	—	1	—	—	1	5	—	2
4th Quarter .....	—	—	1	—	—	—	—	—	1
	9	2	26	—	—	10	9	2	36

The epidemic of Scarlet Fever that had been in evidence for the past two years died out in the Spring of 1916, and at present there are fewer cases than for many years past.

The numbers of cases of non-notifiable infectious disease are shown in the following table:—

NON-NOTIFIABLE INFECTIOUS DISEASES OCCURRING AMONG SCHOOL CHILDREN DURING THE YEARS 1914, 1915 AND 1916.

	Whooping Cough.			Chicken-pox.			Mumps.			Sore Throat.		
	1914	1915	1916	1914	1915	1916	1914	1915	1916	1914	1915	1916
1st Quarter, Jan. to March	13	104	70	128	125	62	115	55	179	168	251	248
2nd Quarter, April to June	116	44	230	70	129	184	13	57	104	119	164	124
3rd Quarter, July to Sept.	65	11	94	15	48	84	19	37	39	131	171	95
4th Quarter, Oct. to Dec.	89	35	48	70	64	224	35	140	32	381	337	214
	283	194	442	283	366	554	182	289	354	799	923	681

In order to minimise, as far as possible, the risk of conveying infection to school, certain children are referred daily to the Medical Officer of Health. These cases consist of  
 convalescents from infectious disease ;  
 contacts with infectious disease ;  
 children who are suspected of infectious disease ;  
 children suffering from sore throats ;  
 and some comparative figures are shown in the next table :—

CHILDREN EXAMINED BY MEDICAL OFFICER OF HEALTH AS TO FREEDOM FROM INFECTION.

Disease.	Number of Examinations				Cases Detected.							
	1913	1914	1915	1916	1913.		1914.		1915.		1916.	
					Diphtheria.	Scarlet Fever.	Diphtheria.	Scarlet Fever.	Diphtheria.	Scarlet Fever.	Diphtheria.	Scarlet Fever.
SCARLET FEVER (Convalescents examined as to their fitness to return to School.)	145	354	991	246	—	—	—	—	—	—	—	—
DIPHTHERIA Ditto.	57	79	24	52	—	—	—	—	—	—	—	—
CONTACTS with cases of Diphtheria examined previous to being allowed to attend School after case removed to Hospital.	131	163	93	141	6	—	3	—	5	—	—	—
SORE THROATS (examined previous to being allowed to attend School).	550	1017	2602	867	1	4	5	7	1	18	6	6
Totals	883	1613	3710	1306	7	4	8	7	6	18	6	6



## BACTERIOLOGICAL EXAMINATIONS

Examinations made for the detection of Diphtheria:—

Year.	Number of			Positive	Negative	
	Examinations made.			Results.	Results.	
1913	...	200	...	7	...	193
1914	...	197	...	5	...	192
1915	...	123	...	6	...	117
1916	...	195	...	6	...	189

Deaths from Infectious Diseases and all other causes among children of school age during the past three years are given in the following table:—

Cause of Death.			1914.	1915.	1916.
Scarlet Fever	...	...	12	15	—
Diphtheria	...	...	3	9	3
Enteric Fever	...	...	1	1	—
Measles	...	...	—	2	1
Whooping Cough	...	...	2	1	2
Diarrhœa	...	...	1	1	—
Other Tubercular Diseases	...	...	7	10	} 13
Tuberculosis of Lungs	...	...	7	7	
All other causes	...	...	27	39	39
Totals			60	85	58

The following table shows the number of visits paid to the homes of school children in investigating and supervising outbreaks of infectious disease:—

To premises where cases of Scarlet Fever, Enteric Fever, or Diphtheria occurred	...	439
Re-visit to ascertain if contacts with Scarlet Fever, Enteric Fever and Diphtheria were Free from infection and fit to return to School	...	179
Re-visit to cases of Scarlet Fever, Diphtheria or Enteric Fever being treated at home	...	168
Visits to homes of children reported by Education Department as being absent from School, owing to either Measles, Whooping Cough, Chickenpox, or Mumps	...	2482
Re-visits to homes of children suffering from either Measles, Whooping Cough, Chickenpox, or Mumps	...	2937
Visits to homes of children absent from School with Sore Throat or Suspicious Rash	...	934
Total	...	7139

## SECTION III.

THE ROUTINE MEDICAL INSPECTION OF SCHOOL CHILDREN AND  
THE WORK CARRIED OUT AT THE INSPECTION AND TREATMENT  
CLINICS, TOGETHER WITH THE SUPERVISION OF THE HOME LIFE  
OF THE CHILDREN.

## A.—ROUTINE MEDICAL INSPECTION.

Children attaining the ages, of 5, 8, and 13 years respectively during the year have been inspected. It should be noticed that these children include those attending the public elementary schools in the Borough, no matter where they reside ; thus, a certain number of children have been inspected who are not inhabitants of the Borough ; on the other hand, a certain number of children who reside in the Borough attend schools outside the boundary, *e.g.*, Sankey and Orford Schools, and would be medically inspected by the School Medical Officers of outside districts.

On referring to Table I. on page 10, the number of children examined during the year will be found, compared with the work of the previous year. The large increase in the amount done is at once obvious.

This table does not by any means represent the total work done, however, for it has to be borne in mind that most of the children are examined on several occasions.

The total number of attendances of these children at the Health Office for re-examination, &c., has not been included.

Again, in this table no mention is made of other extra work such as the examination of mentally and physically defective children, or the examination of children for special schools, scholarships, &c., detailed on page 40.

TABLE I. Number of Children Inspected 1st January, 1916, to 31st December, 1916, together with the figures for 1915.

A.—“CODE” GROUPS.

	Entrants. (5 years).		Intermediate (8 years).		Leavers. (13 years).		TOTAL.
	1916.	1915.	1916.	1915.	1916.	1915.	
Boys ... ..	682	598	819	705	564	575	1915. 1878
Girls ... ..	708	632	753	738	647	538	1908
Totals ... ..	1390	1230	1572	1443	1211	1113	3786

B.—GROUPS OTHER THAN “CODE.”

	Special Cases.  1		Re-examinations. (i.e. No. of Children Re-examined).  2		No. of Children Examined at Inspection Clinic.  3		TOTAL.
	1916.	1915.	1916.	1915.	1916.	1915.	
Boys ... ..	251	198	1646	687	4254	3655	1915.
Girls ... ..	198	180					
Totals ... ..	449	378	1646	687	4254	3655	6349
							4720

GRAND TOTAL, 10,522 in 1916.

GRAND TOTAL, 8506 in 1915.

1. Special cases, pages 26 and 27, brought out by teachers at the Routine Inspections.
2. Cases followed up from Routine Examinations. Cases of Tuberculosis examined at Health Office, page 20, together with “Further Examinations,” page 28.
3. Includes those sent by teachers as cases of contagious and non-contagious disease, pages 38 and 39, together with those sent by School Attendance Officers on account of doubt as to their inability to attend school, page 40.



## ABBREVIATED FORM OF TABLE II.

Return of defects found in the course of Medical Inspection.

DEFECT OR DISEASE.	Code Groups.		Specials.	
	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.
	1.	2.	3.	4.
Malnutrition ... ..	76	—	6	—
Uncleanliness of: Head...	201	—	8	—
Uncleanliness of: Body...	4	—	—	—
Skin—				
Ringworm: Head ... ..	13	—	5	—
Ringworm: Body ... ..	5	—	—	—
Scabies ... ..	2	—	1	—
Impetigo ... ..	51	—	21	—
Other Diseases ... ..	2	—	5	—
Eye—				
Defect. Vision & Squint ...	493	26	90	28
Ext. Eye Diseases ... ..	99	14	28	8
Ear—				
Defective Hearing ... ..	13	8	—	—
Ear Disease ... ..	19	—	24	—
Teeth: Dental Disease ... ..	490	—	2	—
Nose and Throat—				
Enlarged Tonsils ... ..	115	—	5	—
Adenoids ... ..	155	—	27	—
Enlarged Tonsils and Adenoids ... ..	10	—	—	—
Heart & Circulation—				
Heart Disease Organic ...	—	10	—	1
Heart Disease Functional...	16	—	—	—
Anæmia ... ..	13	—	7	—
Pulmonary Tuberculosis				
Definite ... ..	4	—	—	—
Pulmonary Tuberculosis Suspected ... ..	—	8	—	—
Chronic Bronchitis ... ..	42	—	2	—
Other Diseases ... ..	—	—	—	—
Nervous System—				
Epilepsy ... ..	—	1	—	1
Chorea ... ..	—	—	3	—
Other Diseases ... ..	—	—	—	2
Non-Pulmonary Tuberculosis—				
Glands ... ..	1	—	1	—
Bones and Joints ... ..	2	1	—	2
Other Forms ... ..	—	—	—	—
Rickets ... ..	12	22	—	2
Deformities ... ..	3	6	—	5
Other Defects or Diseases ...	81	—	13	—

TABLE II. (page 11) shows the number of defects found in the children who were examined, and fuller particulars as to sex and age of the children affected will be found in the Summary at the end of the Report (Table IIA.)

ATTENDANCES AT ROUTINE INSPECTION.—The percentage of attendances of those notified that the medical inspection was to take place was approximately that of previous years. (See 1914 Report, page 19.)

LETTERS SENT NOTIFYING PARENTS OF DEFECTS IN THEIR CHILDREN.—The number of letters sent (923) was larger than in 1915 (764).

AVERAGE HEIGHT AND WEIGHT.—The height is taken in the stockinged feet, and the weight after the child has taken off boots, coat and waistcoat in the case of a boy, boots and dress in the case of a girl. In this year's Report these statistics are not included and call for no special comment.

NUTRITION AND MALNUTRITION.—It is a difficult matter accurately to compare the figures showing the nutrition of the children from year to year. So much depends on the personal equation of the Examiner during the year and the standard he lays down for himself.

During 1916 special inquiries were instituted into the question of malnutrition among the scholars attending our schools, and I am indebted to Dr. Gilder for the statistics that follow.

The total number of children examined in the schools was 4,173, and their condition, according to age-periods, is shown in the following table:—

EXAMINATION OF 4,173 CHILDREN.

## NUTRITION.

	Above Normal.	Normal.	Below Normal.	Markedly Defective.
Leavers	... 92 ...	1040	... 46 ...	33 = 1211 (3.7%) (2.7%)
Intermediate...	84 ...	1212	... 249 ...	27 = 1572 (15.8%) (1.7%)
Entrants	... 172 ...	1153	... 49 ...	16 = 1390 (3.5%) (1.1%)
	348 ...	3405	... 344 ...	76 (8.3%) (81.5%) (8.2%) (1.8%)



From this it is evident that the proportion of children suffering from markedly defective nutrition increases gradually throughout school life and is higher among the "leavers" than among "entrants." When the class with nutrition somewhat "below normal" is included, however, the Intermediate (*i.e.*, children aged 8 to 9 years) are found to be the chief sufferers.

Contrasting these figures for the past five years we find:—

NUTRITION.							
		Above Normal.		Normal.		Below Normal.	Markedly Defective.
1916	...	8.3	...	81.5	...	8.2	1.8
1915	...	7.6	...	83.7	...	8.6	.2
1914	...	9.7	...	87.9	...	2.2	.02
1913	...	8.3	...	86.7	...	4.7	—
1912	...	15.2	...	83	...	1.5	.18

Too much stress must not be laid on this comparison, as several different Medical Officers have carried out these examinations during the period, but it would appear that malnutrition has increased during the past two years.

In deciding as to the condition of nutrition of the child many points are taken into consideration—weight for age, ratio of height to weight, general balance and substance of the body, firmness of the tissues, presence or absence of subcutaneous fat, &c., and the child is examined on many occasions.

MALNUTRITION.—The children found to be suffering from markedly defective nutrition were 76 in number and special investigations were made into every case as to the cause of the condition.

A lot of interesting facts were elicited, but the tables would take up too much space if printed in full. The table page 14, however, gives a summary of the investigation and some important points can be noted.

The condition is much more common among boys than among girls.

The effect on school work, as might be expected, was very marked. In only 3.9% of the cases examined was the mental condition considered by the teachers to be "bright"; in 35.5% it was considered "fair"; while in 60.5% it was assessed as "dull."

With reference to causation it was found that more than one particular cause contributed in almost every case towards the production of the process of defective nutrition. The main causes, however, differed with the age of the child.

# MALNUTRITION. CAUSATION.

Post-natal.

Age Group.	Sex.		Ante-Natal (parents' physique & family history, &c.)	Natal prematurity special circumstances at birth)	(a) Infantile feeding, rickets, &c.	(b) Subsequent sleep, defects, &c.	Social, housing, poverty, &c.	Infectious disease (measles chiefly)	Oval and dental sepsis	Employment out of school hours	Related to re-tuberculous conditions.	Effect of Malnutrition on School Work.			Results of Treatment	
												Bright	Fair	Dull	Improving	Unchanged
Leavers (13 years of age & upwards)	26	7	33	—	6 (18.1 per cent.)	—	9 (23.2 per cent.)	5 (15 per cent.)	8 (21.2 per cent.)	23 (69.6 per cent.)	—	3	11	19	28 (84.8 per cent.)	5
Intermediate (8 to 9 years of age)	21	6	27	1 3.7 per cent.)	7 (25.9 per cent.)	10 (37 per cent.)	10 (37 per cent.)	4 (14.3 per cent.)	2	—	6 (22.2 per cent.)	—	11	16	21 (77.7 per cent.)	6
Entrants (5 to 6 years of age)	10	6	16	—	8 (50 per cent.)	8 (50 per cent.)	5 (37.2 per cent.)	6 (37.5 per cent.)	—	—	6 (37.5 per cent.)	—	5	11	9 (56.2 per cent.)	7
Total .....	57	19	76	1	21	18	24	15	10	23	12	3 (3.9 per cent.)	27 (35.5 per cent.)	48 (60.5 per cent.)	58 (76.3 per cent.)	18



Among the "leavers" the most outstanding cause was the employment of the child out of school hours. In a few cases, when the harmful effects of insufficient rest and loss of sleep were pointed out to the parents, they took the child away from its employment, and the improvement in general health was very soon perceptible.

In the "Intermediate Group" 25.9% of causes were traceable directly to a wrong method of feeding during infancy and a consequent rickety condition of the child. It was found that in 37% of cases the mothers went out to work during the day and that the children neither had their food properly prepared for them, nor did they get sufficient sleep. The majority of these mothers stated that they did not go out to work before the War.

Infectious disease, especially measles, was responsible as one of the causes in 14% in the group.

Among "the entrants" again the predominating cause appeared to be wrong methods of feeding from infancy upward, and in nearly every instance the mother was working away from home during the day. Overfeeding, particularly with excessive quantities of starchy matter, was found to be a potent cause of defective nutrition in some of this class. These children invariably suffer from chronic intestinal indigestion, and the consequent disordered function of assimilation following it. Debility following measles also had a large share in causing the condition among these younger children.

In very few cases indeed was actual poverty shown to be a cause.

One cannot leave this subject without some further reference to the question of adequate feeding. One of the great problems of the future will be to see that all children receive ample and suitable nourishment if a strong and healthy race is to grow up. The question is not so much one of poverty as of carelessness and ignorance of what constitutes a suitable diet.

This is frequently seen in the feeding of infants from the earliest age—the mother is willing to spend money on all sorts of patent foods, but often never really tries to give her offspring its natural food.

Further, in a certain class, as the child grows older, tinned foods, fried fish and chipped potatoes, and cake become staple articles of diet, irrespective of the fact that at a less cost more suitable food can be procured.

The secret of the popularity of the articles mentioned lies, of course, in the fact that they need little preparation to

form a meal. The class of women concerned will not readily admit she cannot cook and will not attend cookery classes.

The teaching of cookery to the elder girls in the schools is very valuable, although its good effects may not be much in evidence for another generation. It would appear that these children (although often excellent cooks of simple food) are allowed little opportunity of cooking at home and the mothers in many cases, in fact, seem to resent any attempt on their part to do so.

So far as the older members of the community are concerned, important progress has been made recently by the institution of Canteens and Dining Rooms in connection with many of the large works under Government control.

In addition to improving the nutrition of the workers, these Canteens may serve other useful purposes:—

- (a) Education of the workers in acquiring a taste for well-cooked nourishing food.
- (b) Education of the women in the method of preparing this food. Demonstrations and instruction in cookery might easily be arranged for the wives of any of the firm's workmen, and if the latter became interested a large number of the women would certainly take advantage of it.

The urgency of the whole problem of the nutrition of both the school child and the child before reaching school age, however, has been much intensified during the past year and increases daily as more women are employed away from their homes. I would not for a moment advocate any measure that would tend in any way to lessen parental responsibility, but one realises that something must be done to see that certain children obtain suitable food during the day.

Possibly an hour could be arranged for the children of workers to attend about mid-day at the Canteen of the works in which their mothers are employed. A cheap and suitable meal could be provided in this way for those cases where there is no one at home to look after the preparation of the children's food in the day-time.

The only alternative to this is that in these cases the mother should be allowed to leave her work to go home and prepare a meal for them. This would not, however, get over the difficulty in those cases where the mother does not prepare proper meals, and would need careful consideration.

It is of national importance and one cannot help thinking that only a small portion of the receipts from the Excess



Profits Tax would be sufficient for inaugurating in connection with Controlled Establishments, where necessary :—

- (1) Crèches for the infants of workers.
- (2) Day Nurseries for children from infancy to school age.
- (3) Feeding Centres for mid-day meals for school children who have no one to look after them at home.

The expenses of these institutions, when once started, would be met in part by the small payments to be exacted from the parents of those accepting the benefits. Local Authorities would, I feel sure, assist, as far as possible, in providing some of the necessary staff.

I would be very glad if one of the up-to-date firms in this Borough would lead the way by considering the advisability of making an experiment on these lines.

For the children of casual workers, charwomen, domestic servants, and the like, the provision by the Local Authority of similar institutions needs consideration.

VERMINOUS HEADS.—The percentage of children found with verminous heads at the Routine Medical Inspections for the past six years is as follows :—

39.7	per cent.	in	1911.
27.9	„	„	1912.
11.9	„	„	1913.
10.8	„	„	1914.
7.3	„	„	1915.
10	„	„	1916.

There is here a slight increase for 1916, and the reduction that has been so gratifying in past years is checked for the present. There can be no doubt that this is one of the manifestations of the lessened parental supervision that is obvious in many branches of our work. (See also large table at end of report.)

VERMIN OF BODY.—In very few instances (*i.e.*, 1 in 1,000) were vermin actually seen, but the recent existence of such was shown by the presence of hæmorrhagic spots.

CLEANLINESS OF THE HEAD AND BODY.—A very small proportion of the children showed marked dirtiness either of the head or the body. This is probably due to a certain amount of preparation of the child, the date of the inspection being known to the parents for at least a fortnight before it actually takes place.

The effect of the work of the School Nurses and of school supervision is very evident from the fact that marked dirty.

cases are only found now either during holiday time or among children who have left school and are bringing younger children to the clinic.

The bathing facilities in certain schools have been used during the year 1916.

CONDITION OF CLOTHING.—The figures show slight improvement with regard to both clothing and footgear. The general opinion of both teachers and nurses is that there is no change in the condition of clothing either for better or worse as the outcome of the War.

RINGWORM AND IMPETIGO.—These figures do not represent the number of children affected with these diseases, inasmuch as those known to be affected in this way are excluded from school, and would not, therefore, be present at the inspection. The greater number of these cases are detected by the teachers and sent up to the Inspection Clinic. (See page 38 *et seq.*)

SCABIES.—The same remarks apply to cases of "itch" as to ringworm and impetigo. There has been a very large increase in the number of cases of this disease during the year. (See page 38.)

ENLARGED TONSILS AND ADENOIDS.—There is nothing special to note with regard to the incidence of these defects.

MOUTH BREATHING (in the absence of organic obstruction).—Considerable attention has been paid during the past year by the medical staff to this condition among children; they have impressed on the teachers, parents and the children themselves the importance of breathing through the nose.

Special instructions in breathing exercises have been printed. These are given to parents when necessary, and the advantages of following them pointed out, especially to cases in which operations have been carried out for the removal of enlarged tonsils or adenoids.

EAR DISEASE.—45% of the children were found to be suffering from aural discharge. Children with aural discharge are carefully examined for the purpose of detecting enlarged tonsils or adenoids, and if these conditions are found to be present their removal is advised.

Cases of aural discharge are treated at the School Clinic, and children are only excluded from school when the discharge is profuse or offensive; but even then the loss of school attendance from this cause may be considerable.

DISEASES OF THE HEART.—Ten out of the 4,173 (.25%) children examined were found to have chronic valvular disease of the heart. The importance of this condition



being detected is very great, as the defect having been ascertained, these children can be protected against undue physical exertion, which might considerably increase the mischief already existing. When the child is allowed to attend school the head teacher is always specially informed of the defect.

**TUBERCULOSIS.**—·03% of the children were found to be suffering from tuberculosis of the lungs and ·13% from other forms of this disease. This figure does not represent the percentage of tuberculous children in the Borough even among those age periods examined, for those suffering from the more marked forms of the disease would not be attending school, and would therefore not be present at the inspection. The lungs of every child presented for Medical Inspection are not thoroughly examined as a routine; only in those cases where a history of a cough is obtained, or symptoms of bronchitis are present, is a more detailed examination of the chest made. Any case in which the slightest suspicion exists as to its being tuberculous in nature is further examined at the Inspection Clinic.

A better idea of the real amount of tuberculosis in Warrington among school children is to be gathered from the notifications received under the Public Health Tuberculosis Regulations, 1912.

The following table shows the number of school children suffering from different forms of tuberculosis who were living in the Borough on the 31st December, 1916, and is divided into those attending and those not attending school:—

		Attending		Not Attending		Total.
		School.		School.		
Tuberculosis of	Lungs ...	38	...	17	...	55
„	„ Glands ...	54	...	13	...	67
„	„ Abdomen ...	4	...	1	...	5
„	„ Peritoneum ...	2	...	3	...	5
„	„ Skin ...	2	...	3	...	5
„	„ Spine ...	1	...	7	...	8
„	„ Hip ...	4	...	5	...	9
„	„ Ankle ...	2	...	5	...	7
„	„ Knee ...	3	...	2	...	5
„	„ Tibia ...	—	...	1	...	1
„	„ Wrist ...	1	...	1	...	2
„	„ Ribs ...	—	...	2	...	2
„	„ Femur and Lower					
	Arm ...	—	...	1	...	1
„	„ Brain ...	1	...	—	...	1
„	„ Finger ...	2	...	—	...	2
		114	...	59	...	173

(Total for 1915 was 151 cases.)

A number of school children are at present living in contact with, or have been in contact with, cases of tuberculosis, as seen from the following list:—

Number of school children at present in contact with living cases of:—

Pulmonary Tuberculosis ...	404
Other forms of Tuberculosis ...	324

Number of school children who have been in contact with:—

Cases of Pulmonary Tuberculosis that have died during the year 1916 ...	145
---	-----

Cases of other forms of Tuberculosis that have died during the year 1916 ...	38
--	----

---

Total ...	911
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It will not be necessary to keep careful supervision over all these children, as some of them have been in contact with non-infectious or "closed" forms of the disease. The others are, however, continually under supervision and are examined at least twice a year on the occasion of the Routine Inspections in the school.

Any doubtful case is referred to the Medical Officer of Health.

During 1916 the following cases were examined at the Health Office, where a record was kept of their weight and the physical signs entered on a special chart:—

	No. of Cases.	No. of Examinations.
Tuberculosis of Lungs ...	44	132
Suspected Tuberculosis of Lungs...	22	61
Tuberculosis of Glands ...	15	49
"    "    Ankle ...	1	1
"    "    Spine ...	4	8
"    "    Skin ...	3	15
"    "    Foot ...	1	1
"    "    Abdomen ...	3	4
"    "    Hip Joint ...	1	1
Tubercular Synovitis ...	1	2
	<hr/> 95	<hr/> 274

The need for a special institution for treating and educating many of these cases is fully recognised, but is necessarily postponed until more normal times.



Fourteen cases (children of school age) were treated in Sankey Sanatorium, with results as stated below:—

Re-attending School	...	...	6
Not yet re-attending School	...	...	6
Still in Sanatorium	...	...	2
			—
			14

Thirteen deaths have occurred during the year of children of school age from the undermentioned forms:—

Tuberculosis of Lungs	...	...	6
„ „ Abdomen	...	...	2
„ „ Peritoneum	...	...	1
„ „ Brain	...	...	4
			—
Total	...	...	13

MENTAL CONDITION.—As to whether the child is bright, fair or dull, the opinion of the teacher is chiefly taken, but the Medical Officer judges as to the mental condition of those who are classed as “backward” or “mentally deficient.” A certain number of these children were specially examined or kept under observation during the year in order to determine their fitness, or otherwise, to benefit by instruction in an ordinary elementary school.

There are some children attending our schools who are obviously mentally defective and will make no progress at all with the ordinary curriculum, but as yet there are no special institutions open to them. (See page 30.)

DEFECTIVE VISION.—The eyesight of boys and girls in the first age group is not tested unless in exceptional cases.

The following figures show the result of the Routine Inspection for the year (see Special Table at end of Report):—

Total number of children whose vision was examined	...	...	2754
Number of children with normal vision in both eyes	...	...	1954 ( <i>i.e.</i> , 70.9%)
Number of children with fair vision ( <i>i.e.</i> , without any eye-strain)	...	...	233 ( <i>i.e.</i> , 8.4%)
Number of children requiring treatment	...	...	567 ( <i>i.e.</i> , 20.5%)

At the present time children who can read  $\frac{6}{12}$  on Snellen's

test type are not further dealt with unless there are other symptoms of visual defect ; if there is difficulty in reading  $\frac{6}{12}$  but the child is able to read  $\frac{6}{18}$  the parents are asked to consult their doctor, but the matter is not pressed further ; should there be any difficulty in reading  $\frac{6}{18}$  the parents are pressed as far as it is possible to obtain treatment.

In the case of those children whose vision is defective, but not serious enough to be followed up, a note is made on their record card which is kept by the head teacher. This is produced at the next routine examination, and the child is again examined in order to see whether there has been any further change in the visual defect.

All cases of defective eyesight are traced back to their place in the school ; in the event of their not already being seated near the black-board the Head Teacher is requested to arrange for this to be done.

SQUINT.—When an eye habitually squints from any cause it tends to become functionally useless, and may ultimately become blind. It is therefore of great importance to detect “squints” early, and to subject the child to suitable treatment.

In the large majority of cases, taken early, the provision of spectacles is all that is necessary.

“Spectacle” Registers have been kept as in former years, but in certain schools the teachers are not always as careful as they might be in seeing that a child wears his glasses daily.

A special investigation was made by Dr. Gilder into the vision of the “leavers” group of children. This investigation was undertaken with a twofold purpose—first, in order to give the parents of the children where necessary guidance in the selection of suitable employment ; and, secondly, to discover, if possible, whether any special causes were at work causing deterioration in eyesight.

The total number of children examined was 1,241 (564 boys and 647 girls), and further particulars are found in the following tables :—



DEFECTIVE VISION IN "LEAVER" GROUP.

		Number of children inspected.	Good vision (not less than $\frac{5}{6}$ )	Fair vision ( $\frac{1}{2}$ but no eye-strain).	Fair vision ( $\frac{1}{2}$ but eye-strain present).	Bad vision.	Total defects requiring treatment.	Percentage requiring treatment.	Number of cases treated.	Percentage of cases treated.	Result of Treatment.		Under Observation.
											Remedied.	Unchanged.	
Boys	...	564	417	24	27	97	124	21.9	96	77.4	83	13	28
Girls	...	647	444	30	41	132	173	26.7	144	83.2	134	10	29
Total	...	1211	861	54	68	229	297	24.4	240	80.8	217	23	57

The percentage of defects requiring treatment was higher in the girls than in the boys (26.7% to 21.9%).

The incidence was found to be greater in certain schools than in others.

The next table shows the proportion of children affected in the different schools:—

	No. of leavers inspected.		No. with defective vision requiring treatment.		Percentage.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Arpley St. ....	50	43	7	6	14	13.9
Beamont C. ....	43	46	12	16	27.9	34.7
Bolton C. ....	22	41	5	9	22.7	21.9
Evelyn St. C. ....	53	59	10	12	18.8	20.3
Fairfield ....	—	55	—	14	—	25.4
Hamilton St. ....	39	49	9	17	25.6	34.6
Heathside ....	46	52	16	23	34.7	44.2
Latchford R.C. ....	7	11	3	1	37.5	9
Smith St. ....	—	27	—	10	—	37
St. Alban's ....	16	14	5	6	31.2	42.8
St. Ann's ....	21	16	6	4	28.5	25
St. Barnabas' ....	12	27	0	8	0	29.6
St. Benedict's ....	27	33	7	7	25.9	21.2
St. Mary's ....	26	43	11	13	42.3	30.2
Silver St. ....	40	32	10	9	25	28.1
Trinity ....	5	7	2	4	40	57.1
Wycliffe ....	35	43	7	6	20	13.9
Sacred Heart ....	10	17	2	3	20	17.6
Parochial ....	83	—	9	—	10.8	—
St. James' ....	29	32	3	5	10	15.6

The actual form of defect is shown in the next table for 217 of the cases:—



[illegible]

The main causes why certain schools have a larger total of children with defects appear to be—

- (1) *Defective Lighting*.—Not only was the amount of light deficient, but also it came from the wrong direction.
- (2) *Seating Accommodation*.—Some children were found to assume a wrong attitude owing to the distance between the seat and the desk not being suitable for the child. Schools having desks that are adjustable do not show so high a proportion of defects as the others.

Near distance work by itself would not cause deterioration in the vision unless accompanied by bad lighting and faulty position of child.

No special evidence was obtained regarding “out-of-school” causes, such as frequenting of picture shows, but there appeared to be a very large number of defects among the girls who were addicted to reading small-type penny periodicals in bad light at home.

TREATMENT OF THE CASES.—240, *i.e.*, 80.8%, of the total received treatment either at the Inspection Clinic (see page ) or through their own medical attendant.

Of these, 73% obtained great improvement of the vision by wearing suitable lenses, and in 7.7% the defects remained unchanged.

The teachers were informed in all the cases so that the children could be kept under constant observation.

EXAMINATION OF SPECIAL CASES SUBMITTED BY HEAD TEACHERS.—At the time of the Routine Inspection of the various age groups the teachers bring out special cases to the doctor. In 1916 the total number of such cases was 449.

The table shows the suspected defect for which the child was submitted, together with the result of the Medical Officer's examination:—

			Defect Present.		Defect Absent.		Total.
Defective Vision	...	...	93	...	33	...	126
Squint	...	...	25	...	—	...	25
Glasses Broken	...	...	23	...	—	...	23
Glasses Unsuitable	...	...	13	...	3	...	16
Illiterate	...	...	1	...	—	...	1
Bad Nutrition	...	...	6	...	—	...	6
Dirty Clothing	...	...	18	...	1	...	19
Pediculosis Capitis	...	...	8	...	—	...	8
Ringworm: Scalp	...	...	5	...	7	...	12
Scabies	...	...	1	...	—	...	1
Impetigo	...	...	21	...	1	...	22
Other Skin Disease	...	...	5	...	1	...	6



	Defect Present.	Defect Absent.	Total.
Septic Teeth ... ..	2	—	2
Mouth Breathing ... ..	30	—	30
Tonsils: Slightly Enlarged	5	—	5
Tonsils: Much Enlarged...	5	2	7
Adenoids: Marked ... ..	27	3	30
Conjunctivitis ... ..	15	—	15
Blepharitis ... ..	13	—	13
Opacities of the Cornea ...	8	—	8
Wax in Ears ... ..	1	—	1
Aural Discharge ... ..	20	1	21
Other Ear Disease ... ..	3	2	5
Defective Articulation ...	8	3	11
Stammering ... ..	5	2	7
Heart Disease: Organic ...	1	—	1
„ „ Anæmia ... ..	7	—	7
Bronchitis ... ..	2	1	3
Tuberculosis: Suspected ...	1	—	1
„ „ Joints ... ..	2	—	2
„ „ Glands ... ..	1	—	1
Chorea ... ..	3	—	3
Nervous Disease ... ..	2	—	2
Rickets: Marked ... ..	2	—	2
Fits ... ..	1	—	1
Deformities ... ..	5	1	6
Other Diseases or Defects ...	13	3	16
Backward ... ..	4	—	4
Deficient ... ..	9	—	9
	414	64	478

EXCLUSIONS.—301 children were excluded by the A.S.M.O. as a result of the Routine Medical Inspection:—

Impetigo ... ..	18
Ringworm: Scalp ... ..	11
Ringworm: Skin ... ..	2
Scabies ... ..	1
Boils ... ..	1
Sore Throat ... ..	5
Feverish ... ..	1
Conjunctivitis ... ..	13
Blepharitis ... ..	33
Stye ... ..	1
Severe Pediculosis Capitis ...	172
„ „ Corporis ... ..	6
Dirty Clothing ... ..	28
Defective Clothing ... ..	1
Defective Footgear ... ..	1
Bronchitis ... ..	5
Incontinence of Urine ... ..	1
Rickets ... ..	1
Total ... ..	301

FURTHER EXAMINATION OF CASES SELECTED AT THE INSPECTION AT THE SCHOOLS.—The further examination of certain cases takes place at the Inspection Clinic on Saturday Mornings.

The following table shows the result of the examination of 347 children :—

		Defect Present.		Defect Absent.		Doubtful.		Total.
Adenoids	...	12	...	16	...	3	...	31
Tonsils	...	10	...	6	...	—	...	16
Adenoids & Tonsils	2	...	—	...	—	...	...	2
Vision	...	32	...	19	...	5	...	56
Squint	...	9	...	1	...	—	...	10
Corneal Opacities	...	5	...	—	...	—	...	5
Nystagmus	...	2	...	—	...	—	...	2
Cataract	...	1	...	—	...	—	...	1
Glasses Unsuitable	12	...	3	...	—	...	...	15
Lungs	...	1	...	1	...	—	...	2
Bronchitis	...	7	...	19	...	—	...	26
Phthisis	...	1	...	1	...	—	...	2
Tuberculosis—								
Joints	...	5	...	—	...	—	...	5
Glands	...	—	...	2	...	1	...	3
Aural Discharge	...	2	...	—	...	—	...	2
Deafness	...	1	...	—	...	—	...	1
Speech	...	1	...	—	...	—	...	1
Epilepsy	...	1	...	2	...	1	...	4
Diseases of the Heart	14	...	17	...	—	...	...	31
Anæmia	...	4	...	11	...	—	...	15
Chorea	...	1	...	1	...	—	...	2
Deformities	...	7	...	—	...	—	...	7
Infantile Paralysis	...	3	...	—	...	—	...	3
Rickets	...	8	...	1	...	—	...	9
Malnutrition	...	58	...	6	...	—	...	64
Other Diseases or								
Defects	...	9	...	4	...	—	...	13
Backward	...	7	...	—	...	—	...	7
Mentally Deficient	..	13	...	—	...	2	...	15
<hr/>								
		228	...	110	...	12	...	350

In many instances these cases were examined on several occasions.



## DEFECTIVE CHILDREN IN THE AREA.

## I.—PHYSICALLY DEFECTIVE CHILDREN.

The work of medical supervision of this class of child was carried out on the lines laid down in my last Report.

The cases which were kept under observation and examined on many occasions were as follows:—

## A.—NOT ATTENDING SCHOOL.

## Tuberculosis of—

Lungs	...	...	...	...	10	
Glands	...	...	...	...	4	
Spine	...	...	...	...	12	
Hip	...	...	...	...	2	
Knee	...	...	...	...	3	
Ribs	...	...	...	...	2	33
Lupus	...	...	...	...	...	1
Old Infantile Paralysis	...	...	...	...	...	10
Cardiac Disease	...	...	...	...	...	6
Rickets	...	...	...	...	...	8
Debility and Anæmia	...	...	...	...	...	3
Keratitis	...	...	...	...	...	2
Pseudo-Hypertrophic Paralysis	...	...	...	...	...	1
Epilepsy	...	...	...	...	...	5
Hernia	...	...	...	...	...	1
One Eye Deficient	...	...	...	...	...	1
Total					...	71

## B.—ATTENDING SCHOOL.

## Tuberculosis of—

Lungs	...	...	...	...	5	
Glands	...	...	...	...	5	
Hip	...	...	...	...	4	
Spine (Potts' Disease)	...	...	...	...	7	
Knee	...	...	...	...	3	24
Lupus	...	...	...	...	...	2
Old Infantile Paralysis	...	...	...	...	...	28
Rickets	...	...	...	...	...	13
Cardiac Disease	...	...	...	...	...	8
Epilepsy	...	...	...	...	...	2
Leg Amputated	...	...	...	...	...	1
Arm Amputated	...	...	...	...	...	1
Deformity of Elbow Joints	...	...	...	...	...	1
Defective Speech	...	...	...	...	...	14
Partially Blind (Old Ulcers, Keratitis, &c.)	...	...	...	...	...	9
Very Deaf	...	...	...	...	...	1
Debility and Anæmia	...	...	...	...	...	6
Total					...	110

## II.—MENTALLY DEFECTIVE CHILDREN.

In 75 cases the special schedule drawn up by the Board of Education has been completed, recording the examination of the cases of backward school children in the Borough.

The intelligence of the child was assessed by the mental tests designed by Binet and Simon. The examination is a long and often tedious one, and though many other backward children remain to be examined, pressure of work prevents it being done at present.

So far our records of these 75 children show:—

Dull	...	...	...	...	12
Very Backward	...	...	...	...	20
Mentally Defective	...	...	...	...	28
Imbeciles	...	...	...	...	8
Idiots	...	...	...	...	7
					—
					75

The treatment required for these children is as follows:—

Ordinary elementary school	...	...	15
Special class with extra supervision	...	...	23
Special school	...	...	23
No school (non-educable)	...	...	14
			—
			75

Under the Mental Deficiency Act (1913) and Elementary Education (Defective and Epileptic Children) Act, 1914, special arrangements will have to be made for dealing with a certain number of these children.

These lists serve to show that there is a large number of children in Warrington for whom some provision will have to be made in the future in the form of a special school.

Before the outbreak of the War the whole matter was under consideration, but it is obviously out of the question to proceed further at present.

A summary of the cases of exceptional children is given in the next table.



TABLE III.—NUMERICAL RETURN OF EXCEPTIONAL CHILDREN IN THE AREA.

		Boys. Girls. Total.			
Blind (including partially blind).		Attending Public Elementary Schools	5	4	9
		Attending Certified Schools for the Blind .....	2	2	4
		Not at School .....	1	2	3
Deaf and Dumb (including partially deaf).		Attending Public Elementary Schools	1	—	1
		Attending Certified Schools for the Deaf .....	8	6	14
		Not at School .....	—	—	—
Mentally Deficient.	Feeble-minded.	Attending Public Elementary Schools	10	13	23
		Attending Certified Schools for Mentally Defective Children .....	—	—	—
		Notified to the Local (Control) Authority during the year .....	—	—	—
		Not at School .....	2	3	5
	Imbeciles.	At School .....	—	1	1
		Not at School .....	3	4	7
	Idiots.	—————	4	3	7
Epileptics.		Attending Public Elementary Schools	2	—	2
		Attending Certified Schools for Epileptics .....	1	—	1
		Not at School .....	2	3	5
Physically Defective.	Pulmonary Tuberculosis.	Attending Public Elementary Schools	26	12	38
		Attending Certified Schools for Physically Defective Children .....	—	—	—
		Not at School .....	6	11	17
	Other forms of Tuberculosis.	Attending Public Elementary Schools	39	37	76
		Attending Certified Schools for Physically Defective Children .....	—	—	—
		Not at School .....	24	18	42
	Cripples other than Tubercular.	Attending Public Elementary Schools	29	15	44
		Attending Certified Schools for Physically Defective Children .....	—	—	—
		Not at School .....	11	7	18
Total .....		176	141	317	

**B.—THE PROCEDURE ADOPTED FOR FOLLOWING UP  
CHILDREN REPORTED BY THE SCHOOL MEDICAL  
OFFICER TO BE DEFECTIVE.**

The parents who were present at the Routine Medical Inspection were informed verbally of any defects.

After the examination of each child, the defect was classified under one of three headings:—(i) those of relatively slight importance in which no further pressure was exerted to ensure treatment was obtained; (ii) those of moderate importance in which a certain amount of pressure by a visit of a School Attendance Officer was brought to bear; and (iii) serious defects in which at least three visits were paid by the School Attendance Officers in order to press the parents to obtain treatment for their children.

The parents of all children, whether present at the inspection or not, were notified of the defects by a letter, and after a fortnight had elapsed a special officer visited the cases under (ii) and (iii). In the case of defects of moderate importance he used his persuasive powers with the parents and met with a considerable degree of success. In the cases where there were serious defects if the parents stated that the children had received attention they were not visited again, but if no action had been taken the cases were visited for a second or third time if necessary. The following table is a summary of the results of the visits paid by the officer during the last twelve months. This return does not show the whole of the visits paid by the officer, as often-times casual visits were made of which no record is kept; nor does it show the work done by the School Medical Officer, as in many cases parents were told to consult him in order to see whether professional advice would induce them to have the defects remedied.

Defects.	Number of Children.	Received Attention.		Left Town.	Out of Borough.	Left School.	Not received Attention.
		1st Visit.	2nd Visit.				
Tonsils ... ..	96	24	38	—	2	1	31
Adenoids ... ..	151	39	48	1	—	1	62
Tonsils & Adenoids ...	10	1	3	—	—	—	6
Vision ... ..	305	124	171	1	5	4	—
Tonsils & Vision ...	9	2	3	—	—	—	4
Adenoids & Vision ...	16	1	6	—	—	—	9
Squint ... ..	60	7	8	1	—	—	44
Squint & Vision ...	5	2	—	—	—	—	3
Adenoids & Squint ...	1	—	—	—	—	—	1
Glasses unsuitable ...	6	2	2	—	—	—	2
Tonsils & Glasses unsuitable ...	1	1	—	—	—	—	—
Frame unsuitable ...	2	1	1	—	—	—	—
Glasses broken ...	9	5	1	—	—	—	3
Anæmia ... ..	3	2	1	—	—	—	—
Anæmia & Cleft Palate	1	—	1	—	—	—	—
Congenital Cataract ...	2	1	—	—	—	—	1
Cataract & Tonsils ...	1	—	—	—	—	—	1
Otitis ... ..	2	2	—	—	—	—	—
Astigmatism ... ..	1	—	1	—	—	—	—



The parents of those children who had not attended to the defects after the third visit of the officer were summoned to attend at the Inspection Clinic with the child, and the School Medical Officer then instructed them as to the necessity for obtaining treatment. If the advice and persuasion of the School Medical Officer was unsuccessful the parents were brought before the Medical Inspection Committee. The Committee endeavoured in the first instance to persuade the parents to obtain treatment, but if persuasion failed their attention was drawn to Section 12 of the Children Act, 1908, which declares that failure on the part of a parent to provide adequate medical aid shall be deemed neglect in a manner likely to cause injury to the child's health. The parents were then warned that a continuance of the neglect would be followed by the exercise of the powers conferred in the Act, and this resulted in the children receiving satisfactory treatment.

Three cases were referred by the Committee to the Law Clerk with a view to prosecution. In one case the parents secured medical attention before the case was actually submitted, and in the other two cases (defective vision) adequate treatment was procured before action had been taken by the Law Clerk.

All the cases which were found to be defective, and the parents had stated that they had received attention when the officer visited the cases, were called up for re-examination by the School Medical Officer to see that the results of the treatment were satisfactory.

The following table gives the results of the re-examinations for the purpose of seeing the effectiveness of the treatment. This table does not account for the same number of cases as in the previous table for the following reasons:—

- (i) Defective cases discovered in the last months of 1915 were carried over for re-examination to 1916.
- (ii) Defective cases discovered in the last months of 1916 were carried over for re-examination to 1917.

Defects.	Examination at which found.	No. of children.	Letters sent.	Visits paid.	Treatment satisfactory.	Left school.	Out of borough.	Before committee.	Under observation.
Vision ... ..	R.	520	520	1026	333	27	4	4	156
" ... ..	Sp. S.	113	113	226	66	4	1	2	42
" ... ..	F. E.	54	50	108	37	3	—	—	14
" ... ..	Sp.(C.)	39	39	78	33	3	—	—	3
Squint ... ..	R.	13	13	26	7	—	—	2	6
" ... ..	Sp. S.	25	25	49	10	2	—	1	13
" ... ..	F. E.	2	2	4	1	—	—	—	1
" ... ..	Sp.(C.)	11	11	22	6	1	—	—	4
Adenoids ... ..	R.	154	154	308	63	6	—	4	85
" ... ..	Sp. S.	24	24	48	13	0	—	—	11
" ... ..	F. E.	4	2	4	—	1	—	—	3
" ... ..	Sp.(C.)	11	9	18	7	2	—	—	2
Enlarged Tonsils	R.	107	107	209	41	10	2	1	54
" " ...	Sp. S.	2	2	4	1	—	—	3	1
" " ...	F. E.	8	6	14	5	—	—	—	3
" " ...	Sp.(C.)	33	33	66	15	3	—	—	15
Tonsils and Adenoids ...	R.	19	19	38	5	—	—	—	14
" " ...	Sp. S.	5	4	9	2	1	—	—	2
" " ...	F. E.	1	1	1	—	1	—	—	—
" " ...	Sp.(C.)	1	1	2	—	1	—	—	—
Squint and Vision ...	R.	8	8	16	6	1	—	—	1
" " ...	Sp. S.	1	1	1	1	—	—	—	—
" " ...	F. E.	1	1	2	1	—	—	—	—
" " ...	Sp.(C.)	1	—	1	1	—	—	—	—
Vision and Adenoids ...	R.	31	31	62	11	—	—	2	20
" " ...	Sp. S.	1	1	2	1	—	—	—	—
" " ...	F. E.	—	—	—	—	—	—	—	—
" " ...	Sp.(C.)	—	—	—	—	—	—	—	—
Vision and Tonsils ...	R.	11	11	22	8	—	—	—	3
" " ...	Sp. S.	—	—	—	—	—	—	—	—
" " ...	F. E.	—	—	—	—	—	—	—	—
" " ...	Sp.(C.)	—	—	—	—	—	—	—	—
Squint and Short Sight	R.	—	—	—	—	—	—	—	—
" " ...	Sp. S.	2	2	4	1	—	—	—	1
" " ...	F. E.	—	—	—	—	—	—	—	—
" " ...	Sp.(C.)	1	1	2	1	—	—	—	—
Vision—Squint. Spec- tacles unsuitable	R.	2	2	4	2	—	—	—	—
" " ...	Sp. S.	—	—	—	—	—	—	—	—
" " ...	F. E.	—	—	—	—	—	—	—	—
" " ...	Sp.(C.)	3	3	4	3	—	—	—	—
Spectacles to be re- paired	R.	—	—	—	—	—	—	—	—
" " ...	Sp. S.	5	5	10	5	—	—	—	—
" " ...	F. E.	—	—	—	—	—	—	—	—
" " ...	Sp.(C.)	—	—	—	—	—	—	—	—
Spectacles unsuitable	R.	2	2	4	2	—	—	—	—
" " ...	Sp. S.	—	—	—	—	—	—	—	—
" " ...	F. E.	—	—	—	—	—	—	—	—
" " ...	Sp.(C.)	3	3	4	3	—	—	—	—
Totals ... ..		1218	1207	2397	691	66	7	19	154

R. Routine. F. E. Further examination.  
 Sp.S. Special cases at school. Sp.(C.) Special examinations at Clinic.



This does not, by any means, represent the total work done, as this only shows the number of children examined, and not the total number of examinations.

Contrasting this work with that of previous years, the percentages treated satisfactorily are somewhat similar:—

	1916.	1915.	1914.
Total children re-examined ...	1218	473	626
Percentage of those satisfactorily treated ...	56.7	60.8	63.8
	(of total)		
Percentage of those who left school before receiving treatment ...	5.4	14.3	1.9
Percentage of those who left the town before receiving treatment ...	.5	4.4	2.5
Percentage of those still under observation ...	37.2	19.8	31.6

The number of children who have left school before receiving adequate treatment for defects is markedly less, owing to a resolution of the Medical Inspection Committee to which the School Attendance Committee agreed, to the effect that exemption from school should not be granted to any child under fourteen years of age until any defect from which the child is suffering has been treated satisfactorily.

No case which has been reported at any time by the School Medical Officer as being defective is written off as satisfactory until the School Medical Officer has made his re-examination and reported that the treatment has satisfied him.

The result of the following up of cases of defects found only at the Routine Medical Inspection in the schools is shown in the next table:—

Condition.	No. of defects found, in which treatment was considered necessary.			No. of defects for which no report is available.	No. of defects treated.	Result of treatment.			No. of defects not treated.	Percentages of defects treated in 1916.
	*Previous year.	New year.	Total.			Remedied.	Improved.	Unchanged.		
Clothing .....		153	153	—	153	153	—	—	—	100%
Footgear .....		21	21	—	21	21	—	—	—	100%
Uncleanliness of head ....		202	201	—	201	201	—	—	—	100%
Uncleanliness of body ....		20	20	—	20	20	—	—	—	100%
Nutrition .....		76	76	—	76	—	58	18	—	100%
Nose and throat .....	318	259	577	192	172	164	—	8	213	29.87%
External eye diseases .....		99	99	—	99	99	—	—	—	100%
Heart and circulation ....		39	39	—	37	27	10	—	2	94.8%
Lungs .....		46	46	—	46	30	14	2	—	100%
Skin .....		71	71	—	71	65	6	—	—	100%
Rickets .....		12	12	—	12	3	5	4	—	100%
Deformities .....		3	3	—	3	—	1	2	—	100%
Tuberculosis :										
(non-pulmonary) .....		3	3	—	3	—	1	2	—	100%
Speech .....		10	10	—	10	—	4	6	—	100%
Mental Condition .....		4	4	—	4	—	1	3	—	100%
Vision and Squint .....	217	771	988	190	534	494	—	40	264	54.04%
Miscellaneous .....	24	61	85	—	85	67	19	4	—	100%
Ear disease .....		19	19	—	19	5	14	—	—	100%

\* Out of 342 cases of nose and throat defects in the 1915 Report for which no Report was available, 24 cases are accounted for as having left school or gone out of the Borough. The remaining 318 are brought forward into this year's record.

Similarly, 63 cases out of 280 defective vision cases have left school or gone away (leaving 217 to be accounted for).

In miscellaneous, 5 out of 29 not accounted for.

The great difficulty has been to obtain adequate treatment for children suffering from defects of the nose and throat and from defective vision. In the past a large number of these cases have gone to the local Infirmary, but, owing to shortage of staff and pressure of war work, it has been found almost impossible to deal with such children at this Institution during the year.

Taking this into account, the percentage of these cases receiving treatment compared with the previous year must be considered satisfactory. Not only is the percentage higher, but the total number of cases actually dealt with is very much larger during 1916.

	1916.	1915.
Defects of Nose and Throat ...	577	518
Number satisfactorily treated ...	172	105
	(29.8%)	(20.2%)
Defective Vision and Squint ...	988	574
Number satisfactorily treated ...	534	245
	(54.0%)	(42.7%)



In the case of defective vision, however, Dr. Gilder undertook to deal, as far as possible, with all necessitous cases, and we are much indebted to him for some very valuable work. During the year he dealt with 263 children, examining the refraction of the eyes, and, where necessary, prescribing spectacles.

Full particulars of the special form of defect is shown in the next table:—

DETAILS OF 263 CASES OF DEFECTIVE VISION TREATED AT THE CLINIC.

		Hypermetropia		Hypermetropic Astigmatism.		Myopia.		Myopic Astigmatism.		Mixed Astigmatism.
Improved	...	63	...	108	...	46	...	21	...	5
Unchanged	...	6	...	—	...	2	...	5	...	7
<hr/>										
Total	...	69	...	108	...	48	...	26	...	12

Further than this, Dr. Gilder re-examined 100 of the worst cases who had had spectacles prescribed in the previous year in order to see if any alteration was required in the lenses they were using.

### C.—INSPECTION CLINIC.

School teachers, school attendance officers, or parents refer any child to this Clinic who is suspected of suffering from any contagious disease. If found by the Assistant School Medical Officer to be so suffering, the child is excluded from school until cured, or until it is considered there would be no risk of any detriment to his own health or that of scholars in contact with him, should he resume attendance at school. The cases are sorted into those who should obtain treatment from the family practitioner or special institution, those who should attend the Treatment Clinic, those who are fit for school but should attend the Treatment Clinic after school hours, and those who are fit for school without any treatment. Where necessary, the School Nurses visit the homes of the children to instruct the mothers as to the measures to be adopted for obtaining treatment for the case, or in order to see that adequate treatment is carried out.

An analysis of these cases attending the Inspection Clinic is as follows :—

Impetigo	...	...	...	1,190
Ringworm	...	...	...	392
Eczema	...	...	...	14
Scabies	...	...	...	177
Conjunctivitis	...	...	...	440
Blepharitis (and other eye diseases)	...	...	...	376
Aural Discharge	...	...	...	210
Pediculosis	...	...	...	304
Abscesses, Septic Sores, and Miscellaneous	...	...	...	721
				<hr/> 3,824

The following are comparative figures showing the numbers of this class of case that have attended during the past five years :—

1912	...	...	...	1,741
1913	...	...	...	2,430
1914	...	...	...	2,891
1915	...	...	...	3,274
1916	...	...	...	3,824

This, however, does not make up the total children attending the Inspection Clinic. There are, in addition, cases known as White Card cases, Green Card cases, and children attending for further examination and re-examination, the result of following up from the Routine Inspections in the schools.

A certain number of cases sent up by teachers to the Clinic were found not to be suffering from contagious disease, and in the majority of cases these are referred to their own doctor.

During the year the number of these (White Card cases) was :—

Abscesses, Boils, &c.	...	...	32
Adenoids and Enlarged Tonsils	...	...	20
Alimentary Ailments	...	...	27
Anæmia and Debility	...	...	10
Burns and Scalds	...	...	2



Bronchitis	...	...	...	...	15
Carious Teeth	...	...	...	...	18
Chorea	...	...	...	...	6
Deafness	...	...	...	...	2
Defective Vision and Squint	...				9
Deformities	...	...	...	...	2
Earache	...	...	...	...	5
Enlarged Glands	...	...	...	...	40
Epilepsy	...	...	...	...	1
Eye Diseases	...	...	...	...	5
Fainting	...	...	...	...	1
Goitre	...	...	...	...	4
Headache	...	...	...	...	3
Incontinence of Urine	...	...	...	...	4
Infectious Diseases	...	...	...	...	6
Lupus	...	...	...	...	1
Nervous Disorders	...	...	...	...	3
Nose and Throat Conditions	...	...	...	...	23
Periostitis	...	...	...	...	3
Phimosis	...	...	...	...	1
Rheumatism	...	...	...	...	1
Rickets	...	...	...	...	1
Septic Sores, &c.	...	...	...	...	20
Sore Throats	...	...	...	...	12
Skin Diseases (non-contagious)...	...	...	...	...	27
Sprains and Bruises	...	...	...	...	6
Tuberculosis (Glands & Joints).. <td>...</td> <td>...</td> <td>...</td> <td>...</td> <td>2</td>	...	...	...	...	2
					<hr/>
					312

(In 1915, 207 such cases were submitted for examination.)

Children who have been absent from school on account of alleged non-infectious illness, and concerning whom the Education Department is doubtful as to their inability to attend school (no medical certificate being forthcoming) are sent up for examination, or in some instances visited by the School Medical Officer at their homes ; 118 of these children (Green Card cases) have been examined during the year.

Abscesses, Boils, &c.	...	...	1
Aural Discharge	...	...	3
Adenoids and Enlarged Tonsils	...	...	4
Alimentary Ailments	...	...	15
Anæmia and Debility	...	...	12
Bronchitis	...	...	8
Chorea	...	...	3
Deafness	...	...	4
Earache	...	...	1
Enlarged Glands	...	...	3
Epilepsy	...	...	4
Eye Diseases	...	...	11
Fracture (Leg)	...	...	1
Goitre	...	...	1
Heart Disease	...	...	2
Headache	...	...	1
Mastitis	...	...	1
Nose and Throat Conditions (including colds)	...	...	16
Pediculosis Capitis	...	...	1
Rheumatism	...	...	2
Ringworm	...	...	1
Scalds	...	...	1
Septic Sores	...	...	11
Toothache	...	...	1
Tuberculosis (Glands, Joints, Skin, &c.)	...	...	6
No defect found	...	...	4

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 118

(In 1915, 174 such cases were submitted for examination.)

The further examinations (see page 28) and re-examinations are also carried out at the Inspection Clinic.

The following were medically examined by the School Medical Officer:—

27 Candidates for Bursarship and Student Teacherships.

29 Candidates for Senior and Junior Scholarships.

7 Boys before admission to Industrial Schools.

10 Boys and 9 Girls before admission to Deaf and Dumb Schools.

3 Boys were examined before re-admission into Blind Schools.



## D.—TREATMENT CLINIC.

EXTENSION OF PREMISES.—An important improvement to the existing Clinic was completed in 1916, whereby the accommodation available for the children was approximately doubled.

It is now possible to allot a separate treatment room and waiting room to the Dentist for his work (see page 51). Further, a new entrance for school children in Garven Place, opening directly into the Clinic, has very largely relieved the overcrowding of the main entrance to the Health Department and has added to the comfort of those attending, as well as of the staff.

The actual work has been carried on much as in previous years.

The cases of minor ailments attending for treatment were as follows:—

	No. of Children.	No. of Attendances at the Treatment Clinic.
Aural Discharge ...	166	1752
Ringworm: Skin ...	175	2249
Scalp ...	175	7582
Conjunctivitis ...	418	4650
Impetigo: Scalp ...	293	1925
Skin ...	798	4155
Blepharitis and other Eye Diseases ...	347	2900
Other Cases ...	493	3342
	2865	28555

In addition to the above the following cases attended after school hours for treatment for ailments that did not necessitate the child staying away from school:—

	No. of Children.	Total Attendances.
Miscellaneous cases— Aural discharge, sores, abscesses, cuts, boils, minor injuries, &c. ...	766	8364

This gives us a total of 3,631 children making altogether 36,919 attendances.

The great increase in the work done in recent years is shown by the following figures:—

	No. of Children treated at School Clinic.	No. of Attendances made by Children at School Clinic (Treatment).
1913 ...	268	2036
1914 ...	1973	16391
1915 ...	3721	36531
1916 ...	3631	36919

Although during 1916 the number of children was slightly less than in the previous year, the number of times the children attended, and, therefore, the amount of work done, was greater.

Further, these figures do not take into account the large number of attendances of children who were receiving home treatment (see page 44) and had to report regularly at the Clinic.

The enormous amount of work is evident, but the following table is still more interesting.

Disease.	No. of cases treated in School Clinic.	Total No. of attendances.	Cases in which treatment completed.				
			No. of cases.	No. of attendances.	Average no. of attendances per case.	No. of days under treatment.	Average no. of days for treatment.
Aural Discharge—							
1916 .....	166	1752	161	1525	9.4	3268	20.3
1915 .....	188	1542	186	1479	7.9	3003	16.1
1914 .....	106	952	73	452	6.1	1262	17.2
1913 .....	16	453	4	27	6.7	172	43.0
Scabies—							
1916 .....	—	—	—	—	—	—	—
1915 .....	33	397	33	397	17.03	797	24.1
1914 .....	12	118	11	117	10.6	225	20.4
1913 .....	6	41	3	21	7.0	93	31.0
Ringworm Skin—							
1916 .....	175	2249	169	2199	13.01	3949	23.3
1915 .....	144	1779	133	1685	12.6	3527	26.5
1914 .....	79	693	74	668	9.0	2391	32.3
1913 .....	14	116	13	107	8.2	587	45.1
Ringworm Scalp—							
1916 .....	175	7582	146	6868	47.04	12469	85.4
1915 .....	162	4481	134	3161	23.5	6549	48.8
1914 .....	65	1607	37	808	21.8	4152	112.2
1913 .....	19	441	6	146	24.3	920	153.3
Conjunctivitis—							
1916 .....	418	4650	409	4548	11.1	8021	19.6
1915 .....	732	10274	711	9973	11.2	17806	25.04
1914 .....	598	7036	548	6407	11.6	17153	31.3
1913 .....	88	437	70	352	5.0	1659	23.7
Impetigo Skin—							
1916 .....	798	4155	793	4129	5.2	7145	9.01
1915 .....	879	5738	866	5694	6.5	7591	8.6
1914 .....	511	2527	507	2516	4.9	6019	11.8
1913 .....	75	289	72	276	3.8	1038	14.4
Impetigo Scalp—							
1916 .....	293	1925	287	1874	6.5	4147	14.4
1915 .....	329	1883	321	1838	5.7	3199	9.9
1914 .....	237	1481	227	1431	6.3	3432	15.1
1913 .....	50	259	45	226	5.0	811	18.0
Blepharitis and other Eye Diseases—							
1916 .. .....	347	2900	336	2785	8.2	5211	15.5
1915 .....	294	2685	287	2616	9.1	5123	17.8
Miscellaneous—							
1916 .....	493	3342	484	3240	6.7	5264	10.9
1915 .....	376	2119	368	2065	5.6	4058	11.02
1914 .....	305	1515	71	347	4.8	828	11.6



In this table are seen the total number of cases which have completed treatment during the year, together with both the average number of attendances and the average number of days the child was under treatment (*i.e.*, was away from school) compared with the years 1913, 1914 and 1915.

For the last three years we have endeavoured to encourage almost daily attendance of the children for treatment, as it was found that the time taken to effect a cure of every form of ailment was lessened by this means (see page 41).

This year it is to be observed that in many instances there is a lengthening in the average duration of treatment (notably in cases of aural discharge, ringworm of scalp, and impetigo).

In part, this is due to several intractable cases (*e.g.*, aural discharge and ringworm) who were attending for nearly the whole year.

Some of the ringworm cases might have been excluded from school by teachers much earlier than they were, and a few of these, when they did come under supervision, were found to have nearly the whole of the scalp involved.

I would like to take this opportunity of emphasising the importance of at once excluding any case about which there may be the slightest doubt until it has been seen by the Medical Officer. These remarks refer only to a small number of the teachers in certain schools, and our thanks are due to the large majority who are doing their very best to help us in this work.

Again, some parents waste a day or two after the child is excluded in trying some homely remedy before sending the child to the Clinic.

It has been impossible for the School Attendance Officers to follow up these cases as energetically this year as in the past. There have been frequent changes of staff; men called up for Military Service have been replaced by women, who had to be taught the work; and over-work has, in some cases, led to illness and further depletion of the staff. This has necessitated neglect of some of the following up, and unless attendance at the Clinic is immediate and regular, the best results cannot be obtained.

But undoubtedly the main cause of this lengthened period of treatment is lack of parental supervision in those cases where both parents are engaged in occupations away from the home.

This acts in several ways :—

- (1) The child is more irregular in attendance at the Clinic where no one is responsible at home during the day.
- (2) The child often leaves off bandages or dressings for the greater part of the day while the mother is away. (This appears to be so in ringworm cases especially.)
- (3) In some instances the child is generally neglected as to the cleanliness, &c., which is necessary for a rapid cure.

HOME TREATMENT.—All cases of minor ailments excluded from school are not, however, treated at the Clinic, but some receive home treatment.

Some of the points taken into account in allowing such treatment are :—

- (1) Intelligence of the mother.
- (2) Length of distance of residence of child from the Clinic.
- (3) Nature of the case needing rest at home (sores on feet, &c.).
- (4) Cases where the mother has a young infant to look after and no one to send with the patient.
- (5) Cases where there happens to be any form of infectious disease in the home.
- (6) Certain ailments, such as scabies, severe pediculosis, &c.

Some of these cases have to attend occasionally at the Clinic in order that the result of the measures adopted at home may be supervised, and in many instances the Nurses visit the homes for the same purpose.

The number of cases dealt with in this manner during 1916 was :—

	Cases.	Attendances at Clinic.	Days under Treatment.
Severe Pediculosis of Scalp ...	297	1186	3030
Scabies ... ..	177	1446	8747
Miscellaneous ... ..	187	450	1680
Total ... ..	661	3082	13457



The length of time these cases are away from school compares fairly favourably with those treated at the Clinic, because they are picked cases ; but it is slightly longer in nearly every instance (*vide* pages 43, Annual Report for 1914).

PEDICULOSIS.—Cases of severe pediculosis of the scalp are not now treated in the Clinic as the result of the experience of former years.

The disadvantages of treatment of this defect at the Clinic are :—

- (1) It encourages laziness in the mother.
- (2) It is a bad example for other children, who begin to think they can at any time have the same treatment, if necessary.
- (3) It takes up too much time.

All these cases now receive treatment in the child's home, but the child has to attend almost daily for inspection at the Clinic. The mode of procedure is that the School Nurse first explains clearly to the mother how the head is to be cleaned—using vinegar and water for the nits and a fine tooth-comb. If rapid improvement does not take place the Medical Officer sees the case in order to advise that the hair be cut short. It has been found that the great cause of failure rapidly to clean a head by means of constantly using a tooth-comb is due to using too cheap and therefore too coarse a comb. No comb costing less than 10½d. has been shown to be effective.

The hair of every child attending the Clinic, no matter for what ailment, is examined on each attendance, and this has caused a marked improvement in the general cleanliness of the heads. Further, the elder girls take more care in doing their hair.

It is extraordinary that many parents are still found who undoubtedly believe that nits in the hair are a sign of good health in the child.

SCABIES.—The number of children affected with scabies was very much larger than in any previous year.

Our records show that—

In 1913 there were 6 cases (average duration of treatment 31 days).

In 1914 there were 12 cases (average duration of treatment 20.4 days).

In 1915 there were 33 cases (average duration of treatment 24.1 days).

In 1916 there were 177 cases (average duration of treatment 49 days).

Almost without exception these cases were traceable to contagion from soldiers returning on leave from France.

A small part of the increase may be due to the extra keenness displayed by teachers and nurses in examining children for this complaint.

In previous years, when the numbers were small, we treated these cases at the Clinic, but then the cases were of a much slighter character.

Most of the children in 1916 had the whole body badly affected, when formerly it was the limbs alone.

It was found impossible adequately to attend to the cases in the Clinic and so home treatment was adopted.

At least twice a week each child attended, however, for inspection, and if not found to be receiving proper attention was summoned daily.

The mother, in the first place, was carefully instructed as to the nature of the case and as to how to treat it and how to prevent its spread to others in the household.

Facilities where possible were provided for steam disinfection of clothing or bedding.

#### WORK OF THE SCHOOL NURSES.

The duties of the School Nurses will be found in previous Reports, but I wish to draw attention here to one branch of their work—that of home visitation.

The number of home visits have materially diminished in the last two years:—

				No. of Visits paid to the Homes of School Children by the Nurses.
1912	...	...	...	1024
1913	...	...	...	1199
1914	...	...	...	1526
1915	...	...	...	1071
1916	...	...	...	756

The work in the homes is probably one of the most important parts of all the school work, but, much as the diminution in number of visits is to be deplored, it has been found impossible to do more.

The Treatment Clinic claims the services of the two Nurses from about 1.30 to 5 p.m. The only time they have for their visits is occasionally in the mornings and on coming from or returning to their homes.



Some reasons for the decrease are :—

- (1) There has been a larger proportion of the first age group examined in the schools during 1916, and the School Nurse is detained much longer with these children than with the elder ones who can dress and undress themselves.
- (2) More dental treatment has been carried on in the mornings, necessitating the presence of one of the Nurses.
- (3) A great many more mothers have attended voluntarily at the Clinic. To some extent this is due to the children talking about it at home and interesting their parents. The Nurses have been able, therefore, in many cases to explain fully the steps in treatment to the mother without the necessity of a home visit.

When possible, home visits are paid in the following cases :—

- (1) In the first case of any form of contagious eye disease occurring in a house to explain to the parent the necessity of great care with regard to towels, handkerchiefs, pillowslips, sleeping accommodation, washing flannels, &c.
- (2) In all cases of scabies, to explain bathing and boiling of clothes and to see if conveniences exist for doing this thoroughly.
- (3) In all cases where the child's clothing or boots appear to be insufficient or very dirty in order that the beds and other home conditions may be examined. If the home is found in an uncleanly state the matter is reported by them to the Health Visitors or Sanitary Inspectors. If signs of neglect, case reported to N.S.P.C.C. Inspector.
- (4) In first cases of pediculosis (see page 45).
- (5) In cases of motherless children, to see what arrangements are made that the child receives proper care and attention. Similarly, in some cases where mothers go out to work, visits are paid to see what arrangements are made for preparing meals.

Occasionally when cases are not attending regularly to warn the parents. Most of these, however, are left to the School Attendance Officers.

Never before was it so essential that more home visits should be paid.

Apart from the fact that in a few instances children do not receive the same careful supervision at home that they had before their fathers left to join the Forces, more mothers are finding employment away from their homes.

In many cases the children are left alone at home throughout the day with no one responsible.

One does not like to ask for an increase in staff at present, but it is certainly a most urgent matter, and by the addition of another Nurse to the staff some most valuable work could be accomplished.

Further, this point might be borne in mind in any change in the personnel of the School Attendance Staff, whose difficulties have been mentioned on page 43.

I should say that possibly 90% of all absentees from school tender some excuse on medical grounds, and a Nurse engaged in visiting in the home would greatly assist the work of the School Attendance Officers.

I do not mean that one Nurse would do nothing else but visit in the homes. This work would be done alternately by all of them; but with three Nurses it would be possible for the equivalent of the time of one to be set aside wholly for home supervision.

With reference to our present staff (Nurse Davey and Nurse Holland) the mere formal representation by statistics of their routine work does not, by any means, do full justice to them.

Their activities are such that it is impossible to keep a record of the way in which their services are helping in the improvement of the home, as well as of the scholar.

I must say that they have performed their many and arduous duties in a most thorough manner, and I have nothing but praise for the way in which they have managed the children attending the Clinic.

#### DENTAL CLINIC.

During the year 1912 a School Dental Clinic was established in two rooms at the Health Department.

A Dental Officer was appointed—

- (a) to inspect any children attending any of the schools under the Authority;
- (b) to treat school children at the school



VISION (continuation of Table II.).

VISION.		Entrants.				Intermediate, 1572.				Leavers, 1211.				Total, 2783.				Special Cases.		
R.	L.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total
—	6/6					1		1	.06	1	3	1	0.8	1		1	.036			
—	6/9					182	126	308	19.6	236	168	404	33.3	418	291	712	25.6	2	2	4
6/6	6/6					77	48	125	7.9	41	38	79	6.5	118	86	204	7.3	1		1
6/6	6/12					2		2	.25		5	5	.4	2	7	9	.32			
6/6	6/18					1	1	2	.12		1	1	.08	1	2	3	.1			
6/6	6/24					1		1	.06	1	1	1	0.8	2	2	2	.07			
6/6	6/36									2	2	2	.16	2	2	2	.07	1		1
6/6	6/60					1		1	.06		1	1	.08	1	1	2	.07			
6/6	6/120									2	2	2	.16	2	2	2	.07			
6/9	6/9					274	319	593	37.7	117	206	323	26.6	391	525	916	33.9	9	10	19
6/9	6/6					46	39	85	5.4	10	27	37	3.05	56	66	122	4.38			
6/9	6/12					30	30	60	3.8	17	8	25	2.06	47	38	85	3.05		2	2
6/9	6/18					14	14	28	1.77	7	5	12	.99	21	19	40	1.4	1	1	2
6/9	6/24					4	1	5	.31	8	6	14	1.15	12	7	19	.68	1		1
6/9	6/36					4	3	7	.44	3	2	5	.4	7	5	12	.43	1	1	1
6/9	6/60					2	2	4	.25	4	6	10	.8	6	8	14	.5	1	1	2
6/9	6/120									1	2	3	.24	1	2	3	.1			
6/12	6/12					2	3	5	.31	1	1	1	0.8	3	3	6	.21	1		1
6/12	6/6					33	31	64	4.07	17	36	53	4.37	50	67	117	4.2	6	4	10
6/12	6/9					4	4	8	.25	5	6	11	.9	9	6	15	.57			
6/12	6/18					14	14	28	1.77	6	8	14	1.15	20	22	42	1.5	1		2
6/12	6/24					4	10	14	.89	3	9	12	.99	7	19	26	.93	2	2	4
6/12	6/36						3	3	.19	1	1	2	.16	1	4	5	.17		2	2
6/12	6/60						2	2	.12		1	1	.08		3	3	.1			
6/12	6/120					2		2	.12					2	2	2	.07			
6/18	—					1		1	.06					1		1	.06			
6/18	6/18					31	22	53	3.37	23	28	51		54	50	104	3.73	4	12	16
6/18	6/6					6		1	.06	1	2	3	.24	2	2	4	.14			
6/18	6/9					10	7	17	1.08	6	6	12	.99	12	17	29	1.07	1	1	2
6/18	6/12					10														





dental clinic by extraction or conservative methods ; and

(c) to keep a record of work and other information required by the Committee ;

and a report by this Officer showing the results of the work up to the end of December, 1916, is appended.

At first the Dental Officer devoted 2 hours a day on 5 days each week to the work, except during holiday time.

It was found, however, that the work was becoming too heavy for one part-time officer, and so a whole-time Dental Officer, Mr. W. Hutchison, was appointed early in 1915.

Owing to lack of accommodation the Dental Treatment Clinic was only held in the mornings, as the room was needed in the afternoon for school children attending with minor ailments.

The time of the Dental Officer in the afternoon was devoted to inspection of the scholars in the schools. As a consequence the number of children treated could not keep pace with the number requiring treatment and found at these inspections.

However, alterations and extensions of the existing premises (which were completed in November, 1916) have enabled us to set apart special rooms for dental work, and this will be much more satisfactory in future.

From November onward no inspections were carried out, but efforts were made to treat as many as possible of the cases found defective earlier in the year.

This explains why the total children inspected for the year is less than in 1915, whereas the total treated is much larger.

The policy in future will be to start each year inspecting and treating the 6 to 8-year-olds. As soon as this group is finished the Dental Officer will re-examine them and then pass on to higher age periods, the 8 to 9 years, 9 to 10 years, and so on, for the remainder of the year. It is hoped in this way to keep nearly all the scholars under annual supervision, as the work for the older children will be less in proportion to the amount done for the entrants.

For further particulars I refer you to Mr. Hutchison's Report, which is appended ; and I must thank him for carrying on the work well and carefully.

Dr. Lumb is still away on Military Service, but Dr. Gilder has ably carried on the duties of Assistant School Medical Officer during his absence. His conscientious and

thorough work is much appreciated by the parents, and we are further indebted to him for the valuable work he has done in remedying many cases of defective vision.

During the year, Miss Phillips, who had acted as School Nurse for the past three years, left to take up other duties; and Mrs. Holland (late School Nurse, Wigan) was appointed in her stead, to work with Nurse Davey.

Mr. Flood, Chief Sanitary Inspector, has accompanied me when inspecting the various school premises, and has given me much valuable assistance in investigating their sanitary condition.

I wish to convey my thanks to Mr. J. Moore Murray, the Director of Education, for assistance in collecting certain information.

I have much pleasure in recording that there has been that hearty co-operation of the officials of the Education Department with those of the Health Department during the past year which I need scarcely add is necessary for the due carrying out of the work detailed in this report.

I am, Gentlemen,

Your obedient servant,

G. W. N. JOSEPH.

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## DENTAL OFFICER'S REPORT.

TO THE EDUCATION AUTHORITY OF THE  
COUNTY BOROUGH OF WARRINGTON.

GENTLEMEN,

I beg to submit my Report on Dental Inspection and Treatment for the year 1916. During that period 6,917 children were examined at the schools. This number is less than in 1915 because the routine inspections were discontinued in the latter part of the year so that more time could be given to the treatment of defects previously found.

Of the 6,917 children, 1,129 (*i.e.*, 16.3%) were found to have sound and 5,788 (*i.e.*, 83.7%) were found to have defective dentition.

The accompanying table shows the work done in 1916, as compared with that of 1915.

	1916.	1915.
No. of children on the School Registers in the Age Periods examined ... ..	7968 ...	9645
No. of these present at examinations ... ..	6917	8389
No. absent from examinations..	1051	1256
No. of parents present at examinations ... ..	494 ...	789
Of the 6917 children examined—		
There were found to have sound dentition ... ..	1129 (16.3%)	1696 (20.2%)
There were found to have defective dentition ... ..	5788 (83.7%)	6693 (79.8%)
Of the 5788 having defective dentition there were requiring treatment to—		
Temporary teeth ... ..	3713 (64.1%)	4232
Permanent teeth ... ..	425 (7.3%)	724
Both temp. and perm. ... ..	1650 (28.5%)	1737

	1916	1915.
No. of these children on whose behalf parents—		
Desired treatment at the Clinic ... .. 4147	...	4274
Did not desire treatment at the Clinic ... .. 1641	...	2419
There were treated at the Clinic—		
By ordinary appointment after Routine Examinations ... 1836	...	778
*By special appointment immediately after Routine Examinations, and other Special Cases ... .. 1455	...	990
Total number treated at the Clinic	3291 ... (56.8%)	1768
Cases where appointment was not kept ... .. 1063	...	546
Treated elsewhere or not at all 1641	...	2419
In addition 72 of the children attended on more than one occasion for special treatment	...	116
Extractions—		
Temporary teeth ... .. 5296	...	2805
Permanent teeth ... .. 315	...	195
Total ...	5611 ...	3000
Fillings—		
Temporary teeth ... .. 62	...	206
Permanent teeth ... .. 448	...	190
Total ...	510 ...	396
No. of cases where a Local Anæsthetic was used... ..	2311 ...	788
No. of cases where Gas was used ... ..	Nil. ...	3
No. of cases involving consultations ... ..	110 ...	70

\* These were urgent cases where it was desirable that attention be given as soon as possible. They were, therefore, not called upon to await their turn for treatment.

#### NOTE ON STATISTICS FOR ANNUAL REPORT OF SCHOOL DENTAL OFFICER.

The number of children awaiting treatment at the Clinic on the 31st December has not been included, as, owing to the omission of treatment of the children who were examined from September, 1915, to the 16th February, 1916, and also to the overlapping, the figures will not be comparable.

The number left untreated of the children examined between May and November, 1916 (who desired treatment at the Clinic) was 2,197, and it is quite possible that some of the children who were examined during the period September, 1915, to February, 1916, are included in this number.

Of the total defects (5,788) 3,713 (64%) were in the temporary set, 425 (7.3%) in the permanent set, and 1,650 (28.5%) in both the temporary and permanent sets.

The high percentage of defects in the temporary set of teeth is still maintained. Every endeavour is made to impress on parents the necessity for the proper selection of food.

At the Clinic, too, children are always advised regarding the care of their teeth.

3,291 children (55.1% of those requiring treatment and 47.5% of those inspected) presented themselves for treatment at the Clinic. This represents the number of defective children and not the number of defects treated.

Of the total number of extractions (5,611) over 5,000 were of temporary teeth which were unsaveable.

The number of fillings done during the year was 510 ; of these, 448 were of the permanent set.

It is gratifying to note an increasing interest among parents as to the condition of their children's teeth.

I beg to add, gentlemen, that since November 15th, 1916, when a new arrangement of morning and afternoon sessions came into force, more work has been accomplished at the Clinic, and in future those found defective will receive treatment earlier.

In conclusion, I wish to express my thanks to the Nurses for their able assistance in the Morning Session.

I am, Gentlemen,

Your obedient servant,

W. HUTCHISON

(School Dental Officer).





TABLE IIA.

## RETURN SHOWING THE PHYSICAL CONDITION OF CHILDREN INSPECTED.

CONDITION.	1st Age.				2nd Age.				4th Age.										
	Entrants.				Intermediate.				Leavers.				Total.				Special Cases.		
	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total
Total Inspected ...	682	708	1390		819	753	1572		564	647	1211		2065	2108	4173		251	198	449
No. of cases in which Parents were present ...	196	218	414	29.7	119	160	279	17.1	30	105	135	11.1	345	483	828	19.8			
No. of cases in which Parents were notified by letter ...	61	49	110	7.9	280	232	512	32	135	166	301	24.8	476	477	923	22.1			
Clothing—																			
Satisfactory ...	650	681	1331	95.7	768	739	1507	95.9	542	640	1182	97.6	1960	2060	4020	96.35			
Unsatisfactory ...	32	27	59	4.3	51	14	65	4.1	22	7	29	2.4	105	48	153	3.65	11	7	18
Footgear—																			
Satisfactory ...	678	707	1385	99.6	812	750	1562	99.35	559	646	1205	99.5	2049	2103	4152	99.5			
Unsatisfactory ...	4	1	5	.4	7	3	10	.65	5	1	6	.5	16	5	21	.5			
Nutrition—																			
Above Normal ...	98	74	172	12.3	58	26	84	5.35	25	67	92	7.5	181	167	348	8.35			
Normal ...	554	599	1153	83	649	563	1212	77.1	499	541	1040	85.7	1702	1703	3405	81.6			
Below Normal ...	24	32	56	4.05	86	157	243	15.45	16	30	46	3.9	126	219	345	8.25			
Markedly Defective ...	6	3	9	.65	26	7	33	2.1	24	9	33	2.9	56	19	75	1.8	6		6
Cleanliness of Head—																			
Clean ...	680	640	1320	95	815	544	1359	86.4	564	515	1079	89.1	2059	1699	3758	90			
Dirty ...		29	29		2	98	100	6.4		85	85	7	2	212	214	5.1			
Pediculi present ...	2	39	41	3	2	111	113	7.2		47	47	3.9	4	197	201	4.9	8		8
Cleanliness of Body—																			
Clean ...	682	706	1388	99.85	811	746	1557	99	562	646	1208	99.75	2055	2098	4153	99.5			
Dirty ...					8	5	13	.8	2	1	3	.25	10	6	16	.4			
Pediculi present ...		2	2	.15		2	2	.2						4	4	.1			
Skin—																			
No Disease ...	661	694	1355	96.8	804	742	1546	97.7	557	642	1199	99	2022	2078	4100	98.3			
Ringworm: Body ...	1		1	.07	3		3	.2		1	1	.1	4	1	5	.1			
Ringworm: Head ...	2	3	5	.4	3	2	5	.3	3		3	.2	8	5	13	.3	5		5
Impetigo ...	18	10	28	2.01	7	8	15	1	4	4	8	.7	29	22	51	1.2	15	6	21
Scabies ...		1	1	.01	1		1	.06					1	1	2	.05		1	1
Other Diseases ...					1	1	2	.12					1	1	2	.05	1	4	5
Teeth—																			
Sound ...	448	454	902	64.8	288	336	624	39.7	384	456	840	69.4	1120	1246	2366	56.9			
Less than four decayed ...	147	176	323	23.3	377	292	669	42.5	150	165	315	25	674	633	1307	31.1			
Four or more decayed ...	87	78	165	11.9	154	125	279	17.8	30	26	56	5.6	271	229	500	12		2	2
Nose and Throat—																			
No Defect ...	530	616	1146	82.4	510	568	1078	68.4	443	515	958	79	1483	1699	3172	76	19	11	30
Mouth Breathers ...	49	7	56	4.05	71	47	118	7.5	6	18	24	2	126	72	198	4.8	3	2	5
Tonsils slightly enlarged ...	47	43	90	6.47	61	44	105	6.6	68	72	140	11.5	176	159	335	8	4	1	5
Tonsils much enlarged ...	13	21	34	2.45	29	14	43	2.73	26	27	53	4.3	68	62	130	3.1			
Adenoids: Slight ...	30	22	52	3.74	100	52	152	9.6	27	15	42	3.4	157	89	246	5.9			
Adenoids: Marked ...	25	3	28	2.01	88	44	132	8.3	1	4	5	.4	114	51	165	3.9	16	11	27
Diseases of the Eye—																			
No Disease ...	657	684	1341	96.5	802	732	1534	97.6	555	631	1186	98	2014	2047	4061	97.35			
Conjunctivitis ...	4	2	6	.4	4	7	11	.7	3	3	6	.5	11	12	23	.55	9	6	15
Blepharitis ...	21	20	41	2.9	11	11	22	1.3	5	8	13	1.1	37	39	76	1.8	5	8	13
Opacities of Cornea ...		2	2	.2	2	3	5	.3		4	4	.3	2	9	11	.23	4	4	8
Other Diseases ...						1	1	.06	1	1	2	.1	1	2	3	.07			
Diseases of Ear—																			
No Disease ...	673	702	1375	98.9	815	748	1563	99.4	560	642	1202	99.3	2048	2092	4140	99.2			
Obstruction R. ...	3	1	4	.3		1	1	.06	2	1	3	.2	5	3	8	.2			
Obstruction L. ...	4		4	.3		1	1	.06		1	1	.1	5	1	6	.15			
Otorrhea R. ...	3		3	.2	1	1	2	.06	1	3	4	.3	5	4	9	.2	11	9	20
Otorrhea L. ...		4	4	.3	3	2	5	.3		1	1	.1	3	7	10	.25	1	3	4
Other Diseases of the ear																			
Speech—																			
Not Defective ...	677	708	1385	99.6	818	750	1568	99.7	563	647	1210	99.9	2058	2015	4163	99.75			
Defective Articulation ...	5		5	.4		1	1	.06	1		1	.1	6	1	7	.15	3	5	8
Stammering ...					1	2	3	.2					1	2	3	.1	5		5
Heart Circulation—																			
No Disease ...	678	707	1385	99.6	807	751	1558	99.1	551	640	1191	98.3	2036	2098	4134	99.05			
Organic Disease ...	2	1	3	.2	1	1	2	.1	3	2	5	.4	6	4	10	.25		1	1
Functional Disease ...	2		2	.2	6	0	6	.4	5	3	8	.65	13	3	16	.4			
Anæmia ...					5	1	6	.4	5	2	7	.55	10	3	13	.3	4	3	7
Lungs—																			
No Disease ...	664	696	1360	97.9	813	747	1560	99.2	564	646	1210	99.9	2041	2089	4130	98.9			
Chronic Bronchitis and Bronchial Catarrh ...	18	12	30	2.1	6	6	12	.8					24	18	42	1	2	1	2
Tuberculosis ...										1	1	.1		1	1	.03		1	1
Other Disease ...																			
Tuberculosis, Non-Pulmonary—																			
No Disease ...	682	708	1390	100	817	753	1570	99.85	562	647	1209	99.9	2061	2108	4169	99.87			
Joints ...					2		2	.15	1		1	.1	3		3	.1	1	1	2
Glands ...									1		1	.1	1		1	.03		1	1
Other Forms ...																			
Diseases of Nervous System—																			
No Disease ...	682	708	1390	100	819	753	1572	100	563	647	1210	99.9	2064	2108	4172	99.97			
Epilepsy (Major or Minor) ...									1		1	.1	1		1	.03	1	2	3
Chorea ...																	2		2
Other Disease ...																			
Rickets—																			
No Disease ...	670	708	1378	99.1	805	747	1552	98.75	561	644	1205	99.5	2036	2099	4135	99.05			
Slight ...	11		11	.8	14	4	18	1.15	3	2	5	.4	28	6	34	.8			
Marked ...	1		1	.1		2	2	.1		1	1	.1	1	3	4	.1	2		2
Deformities—																			
No Deformity ...	681	708	1389	99.9	818	751	1569	99.8	561	645	1206	99.6	2060	2104	4164	99.81			
Deformity Present ...	1		1	.1	1	2	3	.2	3	2	5	.4	5	4	9	.2	2	3	5
Other Diseases or Defects	31	12	43	3.1	12	10	22	1.4	18	8	26	2.1	61	20	81	2	8	5	13
Mental Condition—																			
Bright ...	399	418	817	58.8	375	399	774	49.2	290	322	612	50.53	1064	1139	2203	53			
Fair ...	222	247	469	33.7	340	255	595	37.9	201	250	451	37.25	763	752	1515	36			
Dull ...	57	43	100	7.2	104	97	201	12.8	73	73	146	12.05	234	213	447	10.7			
Backward ...	4		4	.3									4						

